

What is claimed is:

1. A position information management system wherein information from a positioning system is acquired in an information terminal and is processed in a central system so as to manage information on a position of the information terminal, comprising:

a plurality of kinds of positioning systems; and
an information terminal for automatically changing any of said positioning systems in an unavailable state, over to an available one of said positioning systems so as to acquire a current position thereof by the use of the positioning system available.

2. The position information management system as set forth in claim 1, wherein said information terminal includes a built-in device which detects a moving direction and a moving speed of said information terminal, and even when all of said positioning systems have become unavailable, said information terminal independently detects and displays its current position.

3. The position information management system

0802153.072997

15

20

25

as set forth in claim 1, wherein a third party can acquire the position of a holder of said information terminal through the central system.

5 4. The position information management system as set forth in claim 3, wherein the third party is the holder of said information terminal.

a 5. The position information management system
10 as set forth in ^{claim 3}~~claim 3 or 4~~, wherein a movement of the current position of the holder of said information terminal is supervised, and when said holder of said information terminal has not moved from an identical site for a predetermined time period, an alarm is
15 raised upon a judgement that an unusual situation has occurred to said holder.

Sub D3
20 6. The position information management system as set forth in claim 1, wherein said information terminal transmits position information of a destination to the central system, thereby to automatically download map data of an appropriate scale from said central system on demand, the map data containing the current position of said information
25 terminal and a position of the destination, and to

display said map data.

Sub
E6

7. The position information management system
as set forth in claim 1, wherein said information
5 terminal retains minimum map data of a region in which
a holder thereof wants to move, in the form of an IC
card.

Sub
B3

8. The position information management system
as set forth in claim 1, wherein said information
terminal retains map data downloaded from the central
system for a certain period of time, and when map data
needed before becomes necessary again, it is searched
for from within the map data retained in said
15 information terminal and is displayed.

Sub
E8

9. The position information management system
as set forth in Claim 8, wherein said information
terminal sets a time period for retaining map data of
20 higher use frequency, to be longer than a certain
period of time.

Sub
B4

10. An information terminal which can
communicate with a central system for managing
25 position information, and which acquires information

08902153.072997
266220 ESTD680

from a positioning system so as to display information on a position of the information terminal, comprising:

interface means being serviced by a plurality of kinds of positioning systems; and

5 control means for automatically changing any of the positioning systems in an unavailable state, over to an available one of said positioning systems so as to acquire a current position of said information terminal by the use of the positioning system
10 available.

11. The information terminal as set forth in claim 10, further comprising a built-in device which detects a moving direction and a moving speed of said information terminal, and wherein even when all of said positioning systems have become unavailable, said information terminal independently determines and displays its current position.

15
20 Sub E'10 12. The information terminal as set forth in claim 10, wherein a third party can acquire the position of a holder of said information terminal through the central system.

25 13. The information terminal as set forth in

08902153-072097

claim 12, wherein the third party is the holder of said information terminal.

a

5 ^{claim 12} ~~claim 12 or 13~~, wherein a movement of the current position of the holder of said information terminal is supervised, and when said holder of said information terminal has not moved from an identical site for a predetermined time period, an alarm is

10 raised upon a judgement that an unusual situation has occurred to said holder.

15 14. The information terminal as set forth in claim 10, wherein said information terminal transmits position information of a destination to the central system, thereby to automatically download map data of an appropriate scale from said central system on demand, the map data containing the current position of said information terminal and a position of the

20 destination, and to display said map data.

Sub E¹²

25 16. The information terminal as set forth in claim 10, wherein said information terminal retains minimum map data of a region in which a holder thereof wants to move, in the form of an IC card.

08902153.072997

17. The information terminal as set forth in claim 10, wherein said information terminal retains map data downloaded from the central system for a certain period of time, and when map data needed before becomes necessary again, it is searched for from within the map data retained in said information terminal and is displayed.

18. The information terminal as set forth in claim 17, wherein said information terminal sets a time period for retaining map data of higher use frequency, to be longer than a certain period of time.

19. The information terminal as set forth in claim 10, wherein said information terminal is a terminal of portable telephone type, in which an antenna for the positioning systems is disposed in a cover for an input button portion of said information terminal.

20. A portable radio terminal, comprising:
position information acquisition means for obtaining current position information; and
means for transmitting the position information obtained by said position information acquisition

08902151-072997
ESTD 08/20/80

Sub
B5

Sub
E14

Sub
D1

20
Sub
B6

means, to another equipment through a radio channel, in compliance with a request for said position information made through the radio channel by the other equipment.

5

21. The portable radio terminal as set forth in claim 20, further comprising means for displaying a map which contains a destination, on the basis of position information of the destination.

10

22. The portable radio terminal as set forth in claim 21, wherein the display means displays a map of an appropriate scale containing the current position of said portable radio terminal and said destination.

15

23. The portable radio terminal as set forth in claim 20, further comprising:

means connected to another equipment, for acquiring position information of a third party; and

20

means for outputting the acquired position information of the third party.

24. A portable radio terminal, comprising:

position information acquisition means for

25

obtaining current position information on the basis

0890251-07297
466240 EST20680

of a radio wave from a satellite;

means for connecting said portable radio terminal through a radio channel with a center which manages current position information of a plurality of portable radio telephone terminals;

means for registering the current position information obtained by said position information acquisition means, in the center through the connection means; and

means for acquiring a current position of the portable radio terminal of a third party from said center through said connection means.

25. The portable radio terminal as set forth in claim 24, wherein an antenna for said position information acquisition means is disposed in a cover for an input button portion of said portable radio terminal.

26. The portable radio terminal as set forth in claim 24, further comprising means for displaying a map which contains the acquired current position of said portable radio terminal of the third party.

27. The portable radio terminal as set forth in

08902153-072997

claim 26, wherein the display means displays a map of
an appropriate scale containing a current position of
said portable radio terminal itself and said current
position of said portable radio terminal of said third
5 party.

add
B7

add
D12

add
E20

add
F17

08902153.072997